CLAIMS

I claim:

1. A composition of matter comprising a polysaccharide covalently bonded to a hydrophobic agent, wherein said hydrophobic agent is a member selected from the group consisting of bile acids, sterols, and alkanoic acids.

2. The composition of matter of claim 1 wherein the polysaccharide is a member selected from the group consisting of heparin, heparin sodium, sulfonated polysaccharides, cellulose, hydroxymethylcellulose, and hydroxypropylcellulose.

3. The composition of matter of claim 2 wherein said polysaccharide is heparin.

4. The composition of matter of claim 3 wherein said heparin has a molecular weight of about 200 to 100,000.

5. The composition of matter of claim 3 wherein said hydrophobic agent is a bile acid selected from the group consisting of cholic acid, deoxycholic acid, chenodeoxycholic acid, lithocholic acid, ursocholic acid, ursodeoxycholic acid, isoursodeoxycholic acid, lagodeoxycholic acid, glycocholic acid, taurocholic acid, glycodeoxycholic acid, glycochenodeoxycholic acid, dehydrocholic acid, hyocholic acid, hyodeoxycholic acid, and mixtures thereof.

~~6. The composition of matter of claim 3 wherein said hydrophobic agent is a sterol~~

selected from the group consisting of cholestanol, coprostanol, cholesterol, epicholesterol, ergosterol, ergocalciferol, and mixtures thereof.

7. The composition of matter of claim 3 wherein said hydrophobic agent is an alkanoic acid comprising about 4 to 20 carbon atoms.

8. The composition of matter of claim 7 wherein said alkanoic acid is a member selected from the group consisting of butyric acid, valeric acid, caproic acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, and mixtures thereof.

6 9. The composition of matter of claim 1 wherein said polysaccharide and said hydrophobic agent are present in a mole ratio of about 1:1 to 1:1000.

SUB B2 10. A pharmaceutical composition comprising (a) a pharmaceutically effective amount of a composition of matter comprising a polysaccharide covalently bonded to a hydrophobic agent, wherein said hydrophobic agent is a member selected from the group consisting of bile acids, sterols, and alkanoic acids and (b) a pharmaceutically acceptable carrier.

8 11. The pharmaceutical composition of claim 7 wherein said pharmaceutically acceptable carrier is an oral drug carrier.

9 12. The pharmaceutical composition of claim 8 wherein said pharmaceutically

acceptable carrier is a sustained release carrier.

13. The pharmaceutical composition of claim 12 wherein said sustained release carrier is a polymeric matrix.

14. The pharmaceutical composition of claim 13 wherein said sustained release carrier is a polymeric matrix selected from the group consisting of poly(ethylene oxide)-poly(ε-caprolactone) copolymers, polyurethane polymers, silicone polymers, ethylene vinyl acetate polymers, hydrogels, collagen, gelatin, and mixtures thereof.

15. The pharmaceutical composition of claim 14 wherein said polymeric matrix is a poly((ethylene oxide)-poly(ε-caprolactone) copolymer.

16. The pharmaceutical composition of claim 10 wherein said polysaccharide is heparin.

17. A method for inhibiting blood coagulation on a medical device that comes in contact with blood comprising coating said medical device with a pharmaceutical composition comprising a polymeric matrix intimately admixed with a composition of matter comprising heparin covalently bonded to a hydrophobic agent.

18. The method of claim 17 wherein said hydrophobic agent is a member selected

from the group consisting of bile acids, sterols, and alkanoic acids.

19. The method of claim 18 wherein said bile acid is a member selected from the group consisting of cholic acid, deoxycholic acid, chenodeoxycholic acid, lithocholic acid, ursocholic acid, ursodeoxycholic acid, isoursodeoxycholic acid, lagodeoxycholic acid, glycocholic acid, taurocholic acid, glycodeoxycholic acid, glycochenodeoxycholic acid, dehydrocholic acid, hyocholic acid, hyodeoxycholic acid, and mixtures thereof; said sterol is a member selected from the group consisting of cholestanol, coprostanol, cholesterol, epicholesterol, ergosterol, ergocalciferol, and mixtures thereof; and said alkanoic acid is a member selected from the group consisting of butyric acid, valeric acid, caproic acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, and mixtures thereof.

15 ~~20.~~ The method of claim 14 ~~17~~ wherein said polymeric matrix is a member selected from the group consisting of poly(ethylene oxide)-poly(ε-caprolactone) copolymers, polyurethane polymers, silicone polymers, ethylene vinyl acetate polymers, hydrogels, collagen, gelatin, and mixtures thereof.

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